



กาวยาซีเมนต์สำหรับ ปูสระว่ายน้ำ ปูกระเบื้องแผ่นใหญ่ แรยยัดเกาะเยี่ยม สูง 4 เท้า



## เวเบอร์โกล์ เกรส



ปูกระเบื้องสระว่ายน้ำ



ปูกระเบื้องขนาดใหญ่ 60x60 ซม. ขึ้นไป  
ปูกระเบื้องแกรนิตโต้ หินแกรนิต หินอ่อน



เหนียว แรยยัดเกาะสูง 4 เท้า



ปูทับกระเบื้องเดิมภายในอาคารได้เลย  
บริเวณส่วนแห้ง เช่น ห้องรับแขก



ไม่มีสารระเหยที่เป็นอันตรายต่อสุขภาพ

**เวเบอร์โกล์ เกรส** กาวยาซีเมนต์ปูกระเบื้องแผ่นใหญ่ กระเบื้องสระว่ายน้ำ คุณภาพสูง ชนิดผสมผสมเดียว ใช้งานเพียงผสมน้ำ ประกอบด้วย ซีเมนต์ ทรายคัดพิเศษ และเคมีพิเศษ เหนียว แรยยัดเกาะสูง 4 เท้า

- **เหมาะกับการใช้ :** กระเบื้องเซรามิก แกรนิตโต้ หินอ่อน หินแกรนิต หินเทียม วัสดุสูงที่สุดถึง 1.20x1.20 ม.
- **ขนาด :** ถุงละ 20 กก.
- **สี :** เทา / ขาว
- **ปริมาณการใช้งาน :** โดยเฉลี่ย 4-7 ตร.ม. ต่อถุง 20 กก.

### วิธีการใช้งาน

#### การเตรียมพื้นผิว

- สำหรับพื้นผิวใหม่ : พื้นผิวต้องเรียบ แนบ ได้ระดับ สะอาด แห้ง และการดูดซึมต่ำ
- สำหรับพื้นผิวเดิม : ตรวจสอบเช็คพื้นผิวขูดลอกสีที่หลุดออก หรือร่องกระเบื้องที่ไม่แนบออก แล้วปูใหม่ ทำจุดค้ำยัน เช่น ผนังปูน หรือกรอบหน้าต่างที่ติดอยู่ตามพื้นผิว ออกให้หมด
- ถ้าพื้นผิวมีรูพรุนมาก (การดูดซึมสูง) จำเป็นต้องทำให้พื้นผิวแห้งเปียกชุ่มและซึมซับน้ำให้อิ่มตัวก่อนปูกระเบื้อง
- ถ้าพื้นผิวเป็นผนังปูนฉาบหรือปูนประดับใหม่ : ควรใช้เวลาบ่มตามมาตรฐาน (คือ 7 วัน ต่อความหนา 1 ซม.) ก่อนปูกระเบื้อง

#### การผสม

ผสมกาวยาซีเมนต์ **เวเบอร์โกล์ เกรส** ลงในน้ำด้วยอัตราส่วน 1 : 3 โดยปริมาตร (น้ำ 1 ส่วน กาวยาซีเมนต์ 3 ส่วน) ใช้เครื่องปั่นความเร็วต่ำ บั่นให้เป็นเนื้อเดียวกัน หรือแบ่งผสมทีละน้อยแล้วคนให้ทั่วจนกว่าไม่จับตัวเป็นก้อน ทิ้งไว้ 3-4 นาที ก่อนนำไปใช้งาน

#### การปูกระเบื้อง

1. ใช้เกรียงหวีปาดกาวยาซีเมนต์ลงบนพื้นผิว
2. ถ้ากระเบื้องขนาดใหญ่กว่า 10x10 นิ้ว ให้ปาดกาวยาซีเมนต์บางๆ ลงบนหลังกระเบื้องให้ทั่ว
3. ปูกระเบื้องลงบนกาวยาซีเมนต์ แล้วใช้ค้อนยางเคาะให้ทั่ว
4. เช็ดกาวยาซีเมนต์ที่ล้นออกมาบริเวณรอยยาแนว และที่ละอองน้ำกระเบื้องออกให้สะอาด
5. ปรับแต่งกระเบื้องภายในเวลา 15 นาที
6. ทิ้งไว้ 24 ชั่วโมง ก่อนทำการยาแนว

#### อายุการใช้งาน และการเก็บรักษา

- 1 ปี นับจากวันที่ผลิต โดยอยู่ในสภาพยังไม่เปิดถุง และถูกเก็บไว้ในที่ร่ม แห้ง ไม่ขึ้นอากาศถ่ายเทสะดวก (ถ้าใช้ไม่หมดถุงต้องมัดปากถุงให้แน่น)

### ข้อมูลทางเทคนิค

ประเภท	กาวยาซีเมนต์คุณภาพสูง
ความหนาแน่น	1.40 กรัม/ซม. <sup>3</sup>
ระยะเวลาบ่มเคมี	3-4 นาที
อายุการใช้งานหลังผสม (เก็บในที่ร่ม)	4 ชั่วโมง
ช่วงเวลาที่ใช้ระหว่างปาดกาวยาซีเมนต์จนถึงปูกระเบื้อง	20-30 นาที
ความหนาทองกาวยาซีเมนต์ที่ปาดลงบนพื้นผิว	2-10 มม.
ก่อนการยาแนวร่องกระเบื้องทิ้งให้กาวยาซีเมนต์แห้งอย่างน้อย	24 ชั่วโมง

หมายเหตุ : ผลการทดสอบเหล่านี้ได้มาจากห้องทดลองตัวอย่าง อาจแตกต่างกับผลที่ได้จากการผสมที่หน้างาน เนื่องจากวิธีการใช้และสภาพของหน้างานที่แตกต่างกัน

### มาตรฐานการรับรอง

มาตรฐานนานาชาติ ISO 13007/มาตรฐานยุโรป EN 12004	มาตรฐาน	ผลการทดสอบ
แรยยัดเกาะของกาวยาซีเมนต์กับกระเบื้อง ISO 13007 part 2-4.4.4.2 or EN 1348-8.2	≥ 1.0 N/mm <sup>2</sup>	2.06 N/mm <sup>2</sup>
แรยยัดเกาะของกาวยาซีเมนต์กับกระเบื้องหลังแห้งน้ำ ISO 13007 part 2-4.4.4.3 or EN 1348-8.3	≥ 1.0 N/mm <sup>2</sup>	1.60 N/mm <sup>2</sup>
แรยยัดเกาะของกาวยาซีเมนต์กับกระเบื้อง 7x เวลาที่ต่างกัน ISO 13007 Part 2-4 or EN 1346	≥ 0.5 N/mm <sup>2</sup>	0.83 N/mm <sup>2</sup>

มาตรฐานอเมริกา ANSI A118.4	มาตรฐาน	ผลการทดสอบ	
การรับแรงเสียดทานของกาวยาซีเมนต์กับกระเบื้อง ANSI A 118.4 - 2012			
-กระเบื้องปูผนัง (Glazed wall tile)	7 วัน	> 2.07 MPa	2.34 MPa
-กระเบื้องโมเสกเคลือบสี (Porcelain Mosaic)	1 วัน	> 0.50 MPa	1.73 MPa
	7 วัน	> 1.38 MPa	3.41 MPa
	28 วัน	> 1.38 MPa	3.15 MPa
	84 วัน	> 1.38 MPa	3.63 MPa
-หินธรรมชาติ (Quarry tile)	28 วัน	> 1.03 MPa	2.74 MPa

การรับแรงเสียดทานของกาวยาซีเมนต์กับกระเบื้องหลังแห้งน้ำ ANSI A 118.4 - 2012	มาตรฐาน	ผลการทดสอบ	
-กระเบื้องปูผนัง (Glazed wall tile)	7 วัน	> 1.38 MPa	1.84 MPa
-กระเบื้องโมเสกเคลือบสี (Porcelain Mosaic)	7 วัน	> 1.03 MPa	2.65 MPa

การรับแรงเสียดทานของกาวยาซีเมนต์กับกระเบื้องหลังการแช่แข็ง ANSI A 118.4 - 2012	มาตรฐาน	ผลการทดสอบ	
-กระเบื้องปูผนัง (Glazed wall tile)	28 วัน	> 1.21 MPa	3.08 MPa
-หินธรรมชาติ (Quarry tile)	28 วัน	> 0.69 MPa	2.84 MPa



# AIT

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### EXECUTIVE SUMMARY

The Structural Engineering Laboratory, School of Engineering and Technology, Asian Institute of Technology (AIT) was engaged by the Saint - Gobain Weber Co.,Ltd., to conduct the performance test of cementitious tile adhesive. The sample in the trademark of " weber.tai gres " was submitted by the Saint - Gobain Weber Co.,Ltd. The series of test were detailed in according with ISO 13007 / European Norms (EN 12004:2005) test methods as follows:

#### Specification of cementitious adhesives

Fundamental Characteristics			
1d Additional Characteristics			
Characteristic	Requirement	Test Method	Results
Tensile adhesion strength	$\geq 1 \text{ N/mm}^2$	ISO 13007 part 2 4.4.4.2 or EN 1348 § 8.2	PASS
Tensile adhesion strength after water immersion	$\geq 1 \text{ N/mm}^2$	ISO 13007 part 2 4.4.4.3 or EN 1348 § 8.3	PASS

Regarding the testing, it was found that the properties of weber.tai gres are conformed to ISO 13007 / European Norms (EN 12004:2005) test methods as specified. These results certify the adequacy and representative character of test samples only.

Reference No: S0161-13

Date of Issue: 3 April 2013

Checked by:

**MR. EKKACHAI YOOPRASERTCHAI**  
RESEARCH ASSOCIATE

Approved by:



**DR. PENNUNG WARNITICHAI**  
LEADER OF CIVIL AND INFRASTRUCTURE  
ENGINEERING THEMATIC (CIE)  
April 3, 2013

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### STRUCTURAL ENGINEERING LABORATORY

### STRUCTURAL ENGINEERING FIELD OF STUDY

### SCHOOL OF ENGINEERING AND TECHNOLOGY

**TYPE OF TEST:** INITIAL ADHESION STRENGTH ( EN 1348:2007 )**TEST SPECIMEN:** Ten (10) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai gres " were prepared in the SE laboratory. The mix proportion of water to " weber.tai gres " ratio was 25.0 % by weight.**CLIENT:** SAINT - GOBAIN WEBER CO., LTD.**DATE OF TEST:** February 26, 2013**TEST METHOD:** After finish the preparation, the test units were placed in standard conditions for 27 days. Bond the pull head plate to the tile with the high strength epoxy and keep the test units for a further 24 hour in standard condition. Determine the tensile adhesive strength.**TEST RESULTS:**

Specimen No.	Width of Specimen (mm.)	Length of Specimen (mm.)	Area (mm <sup>2</sup> )	Maximum Load (N.)	Tensile Adhesion Strength (N/mm <sup>2</sup> )	Remarks
1	50	50	2,500	4,962	1.98	Adhesive failure between tile and adhesive
2	50	50	2,500	4,992	2.00	Cohesive failure within the adhesive
3	50	50	2,500	5,021	2.01	Cohesive failure within the adhesive
4	50	50	2,500	4,501	1.80	Cohesive failure within the adhesive
5	50	50	2,500	6,002	2.40	Cohesive failure within the adhesive
6	50	50	2,500	5,031	2.01	Adhesive failure between tile and adhesive
7	50	50	2,500	3,942	1.58	Adhesive failure between tile and adhesive
8	50	50	2,500	4,698	1.88	Adhesive failure between tile and adhesive
9	50	50	2,500	6,757	2.70	Cohesive failure within the adhesive
10	50	50	2,500	5,678	2.27	Cohesive failure within the adhesive
				Average	2.06	

**Note:** This report certifies the adequacy and representative character of the test sample(s) only.**TESTED BY:**  
**MR. APIRAK POORAT**  
TECHNICIAN**CHECKED BY:**  
**MR. EKKACHAI YOOPRASERTCHAI**  
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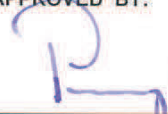
### STRUCTURAL ENGINEERING LABORATORY

### STRUCTURAL ENGINEERING FIELD OF STUDY

### SCHOOL OF ENGINEERING AND TECHNOLOGY

**TYPE OF TEST:** ADHESIVE STRENGTH AFTER WATER IMMERSION ( EN1348:2007 )**TEST SPECIMEN:** Ten (10) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai gres " were prepared in the SE laboratory. The mix proportion of water to " weber.tai gres " ratio was 25.0 % by weight.**CLIENT:** SAINT - GOBAIN WEBER CO., LTD.**DATE OF TEST:** February 26, 2013**TEST METHOD:** After finish the preparation, the test units were placed in standard conditions for 7 days and stored in water for 20 days. Bond the pull head plate to the tile with the high strength epoxy and keep the test units for a further 24 hour in in water at the standard temperature. Determine the tensile adhesive strength.**TEST RESULTS:**

Specimen No.	Width of Specimen (mm.)	Length of Specimen (mm.)	Area (mm <sup>2</sup> )	Maximum Load (N.)	Tensile Adhesion Strength (N/mm <sup>2</sup> )	Remarks
1	50	50	2,500	3,393	1.36	Adhesive failure between tile and adhesive
2	50	50	2,500	4,580	1.83	Cohesive failure within the adhesive
3	50	50	2,500	3,727	1.49	Adhesive failure between tile and adhesive
4	50	50	2,500	4,237	1.69	Adhesive failure between tile and adhesive
5	50	50	2,500	4,011	1.60	Adhesive failure between tile and adhesive
6	50	50	2,500	4,796	1.92	Cohesive failure within the adhesive
7	50	50	2,500	3,874	1.55	Cohesive failure within the adhesive
8	50	50	2,500	3,511	1.40	Adhesive failure between tile and adhesive
9	50	50	2,500	4,021	1.61	Cohesive failure within the adhesive
10	50	50	2,500	3,844	1.54	Cohesive failure within the adhesive
				Average	1.60	

**Note:** This report certifies the adequacy and representative character of the test sample(s) only.**TESTED BY:**  
MR. APIRAK POORAT  
TECHNICIAN**CHECKED BY:**  
MR. EKKACHAI YOOPRASERTCHAI  
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### STRUCTURAL ENGINEERING LABORATORY

### STRUCTURAL ENGINEERING FIELD OF STUDY

### SCHOOL OF ENGINEERING AND TECHNOLOGY

**TYPE OF TEST:** OPEN TIME ( EN1346 )**TEST SPECIMEN:** Thirty (30) specimens of Ceramic tile of size 50 x 50 x 5 mm. installed by using " weber.tai gres " were prepared in the SE laboratory. The mix proportion of water to " weber.tai gres " ratio was 25.0 % by weight.**CLIENT:** SAINT - GOBAIN WEBER CO., LTD.**DATE OF TEST:** February 26, 2013**TEST METHOD:** Apply a thin layer of the adhesive to the concrete slab with a straight edge trowel. After 5, 10 and 20 minutes place the tiles on the adhesive and storage them under standard conditions for 27 days. Bond the pull head plates to the tiles with the high strength epoxy and keep the test units for a further 24 hour in standard condition. Determine the tensile adhesive strength.**TEST RESULTS:**

Specimen No.	Tensile adhesion strength of specimen in different open time (N/mm <sup>2</sup> )		
	5 (min.)	10 (min.)	20 (min.)
1	1.57	1.22	0.82
2	1.71	1.03	0.80
3	2.14	1.29	0.95
4	1.79	0.97	0.81
5	1.66	1.33	0.89
6	1.97	1.27	0.87
7	1.82	1.41	0.72
8	1.91	1.15	0.76
9	1.56	1.14	0.79
10	1.58	1.26	0.90
<b>Average</b>	<b>1.77</b>	<b>1.21</b>	<b>0.83</b>

**Note:** This report certifies the adequacy and representative character of the test sample(s) only.**TESTED BY:**  
MR. APIRAK POORAT  
TECHNICIAN**CHECKED BY:**  
MR. EKKACHAI YOOPRASERTCHAI  
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## Tests of modified dry-set cement mortar according ANSI A118.4:2012 - weber tai.gres

Working report N° 315.34860-01 /17

Client: **Saint-Gobain Weber Co., Ltd - Thailand**

Contact at client: **Luis Silva**

Contact at CTCV: **J. Valente de Almeida**

Work period: **January - April 2017**

Proj. n° 315.34860

Rep. n° 02

Revision:

**CTCV**  
05.12.2017  
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Date: December 2017

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Os resultados apresentados neste trabalho referem-se apenas às amostras ensaiadas. Não se assume qualquer responsabilidade relativa à exatidão da amostragem, a menos que seja efetuada sob a direta responsabilidade do CTCV. A reprodução deste trabalho é autorizada apenas na sua forma integral. Para qualquer reprodução parcial será indispensável autorização do CTCV por escrito.

VA/ --

Proj. n° 315.34860

Rep. n° 02

Revision: 0

Date: December 2017

Página 2 de 7

# ***Tests of modified dry-set cement mortar according ANSI A118.4:2012 - weber tai.gres***

***Saint Gobain Weber Co Ltd - Thailand***

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## **Aim**

Evaluate compliance of the test results with the requirements of ANSI A118.4: 2012<sup>1</sup>.

## **1. Introduction**

Saint Gobain Weber Co Ltd - Thailand requested the CTCV to carry out tests on modified dry-set cement mortar - weber tai.gres - in accordance with the American Standard ANSI A118.4.

This report presents the methodology of the tests, the results of the tests carried out and their comparison with the applicable regulatory requirements

## **2. Methodology**

The methodology used in the study was the following:

- carrying out the tests
- processing of data
- reporting

### **2.1. Tests**

The tests carried out are presented at table 1.

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<sup>1</sup> ANSI A118.4:2012 - American National Standard Specifications for Modified Dry-Set Cement Mortar.



Table 1 - Tests according ANSI A118.4

Property	Test duration and/or conditions
Glazed wall tile shear strength (A1)	7 days 7 days water immersion
Porcelain mosaic tile shear strength (C)	1 day 7 days 7 days water immersion 28 days 28 days w/freeze-thaw cycling 12 weeks
Quarry tile shear strength (D)	28 days 28 days w/freeze-thaw cycling

## 2.2. Test results

The test results are presented at tables 2 and 3.

Os resultados apresentados neste trabalho referem-se apenas às amostras ensaiadas. Não se assume qualquer responsabilidade relativa à exatidão da amostragem, a menos que seja efetuada sob a direta responsabilidade do CTCV. A reprodução deste trabalho é autorizada apenas na sua forma integral. Para qualquer reprodução parcial será indispensável autorização do CTCV por escrito.

Table 2 - Test results (A1 and C)

Ceramic	Test duration/condition	Specimen	Force (kN)	Tension (MPa)	Average (MPa)
A1	Shear initial, 7d	1	11,38	2,21	2,34
		2	12,15	2,35	
		3	11,17	2,16	
		4	13,62	2,64	
	Shear, after 7 d water immersion	1	7,81	1,51	1,84
		2	12,91	2,50	
		3	7,37	1,43	
		4	9,97	1,93	
C	Shear initial, 1d	1	3,07	1,64	1,73
		2	3,00	1,60	
		3	3,59	1,92	
		4	3,27	1,75	
	Shear initial, 7d	1	6,31	3,37	3,41
		2	6,43	3,44	
		3	6,30	3,37	
		4	6,44	3,44	
	Shear initial, 28d	1	6,03	3,22	3,15
		2	5,35	2,86	
		3	5,75	3,07	
		4	6,46	3,45	
	Shear initial, 12 weeks	1	5,92	3,17	3,63
		2	7,11	3,80	
		3	7,17	3,83	
		4	6,94	3,71	
	Shear, after 7 day water immersion	1	4,42	2,36	2,65
		2	5,30	2,83	
		3	4,95	2,65	
		4	5,12	2,74	
Shear, after freeze-thaw	1	5,19	2,78	3,08	
	2	4,83	2,58		
	3	6,95	3,72		
	4	6,06	3,24		

Os resultados apresentados neste trabalho referem-se apenas às amostras ensaiadas. Não se assume qualquer responsabilidade relativa à exatidão da amostragem, a menos que seja efetuada sob a direta responsabilidade do CTCV. A reprodução deste trabalho é autorizada apenas na sua forma integral. Para qualquer reprodução parcial será indispensável autorização do CTCV por escrito.

Table 3 - Test results (D)

D	Shear initial, 28d	1	28,45	3,06	2,74
		2	24,77	2,66	
		3	22,49	2,42	
		4	26,22	2,82	
	Shear, after freeze-thaw	1	27,90	3,00	2,84
		2	22,41	2,41	
		3	28,78	3,09	
		4	26,74	2,88	

### 3. Comparison with standard requirements

The comparison of test results with standard requirements is presented at Table 4.

Table 4 - Comparison of test results with standard requirements

Ceramic	Test duration/condition	Test result (MPa)	Requirements (MPa)	Compliance
A1	Shear initial, 7d	2,34	>2,07	Complies
	Shear, after 7 d water immersion	1,84	>1,38	Complies
C	Shear initial, 1d	1,73	>0,50	Complies
	Shear initial, 7d	3,41	>1,38	Complies
	Shear initial, 28d	3,15	>1,38	Complies
	Shear initial, 12 weeks	3,63	>1,38	Complies
	Shear, after 7 day water immersion	2,65	>1,03	Complies
	Shear, after freeze-thaw	3,08	>1,21	Complies
D	Shear initial, 28d	2,74	>1,03	Complies
	Shear, after freeze-thaw	2,84	>0,69	Complies

Coimbra, 05 December 2017



Joaquim Valente de Almeida

Testing Materials Laboratory



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# ANNEX

## Test reports

Os resultados apresentados neste trabalho referem-se apenas às amostras ensaiadas. Não se assume qualquer responsabilidade relativa à exatidão da amostragem, a menos que seja efetuada sob a direta responsabilidade do CTCV. A reprodução deste trabalho é autorizada apenas na sua forma integral. Para qualquer reprodução parcial será indispensável autorização do CTCV por escrito.

VA/ --

Proj. n.º 315.34860

Rep. n.º 02

Revision: 0

Date: December 2017

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TEST REPORT Nº 1.5.1918/2017  
Sample ref. 2017.03.62/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand Process nº 3.1.5. 34860  
Address Bangkok - Thailand  
Material Cimentitious adhesive Test date 25-01-2017  
Client ref. Weber.tai grés Entrance date 09-01-2017

## DETERMINATION OF SEVEN DAY SHEAR STRENGTH TO GLAZED WALL TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	11,38	2,2	2,3
2	12,15	2,4	
3	11,17	2,2	
4	13,62	2,6	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 % (w/w)  
Sampling made by manufacturer

COIMBRA, 11 July 2017

Laboratory Technician  
  
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Laboratório de Ensaios de Produtos

TEST REPORT Nº 1.5.1921/2017  
Sample ref. 2017.03.62/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand Process nº 3.1.5. 34860  
Address Bangkok - Thailand  
Material Cimentitious adhesive Test date 01-02-2017  
Client ref. Weber.tai grés Entrance date 09-01-2017

## DETERMINATION OF SEVEN DAY WATER IMMERSION SHEAR STRENGTH TO GLAZED WALL TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	7,81	1,5	1,8
2	12,91	2,5	
3	7,37	1,4	
4	9,97	1,9	

Condition of all test materials to be tested 24 h under standard conditions

Test conditions: (23±2) °C, (50±5) % R.H.

Amount of water admix: 22 % (w/w)

Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT N° 1.5.1925/2017  
Sample ref. 2017.03.63/CIC

Client	SAINT-GOBAIN WEBER Co., Ltd. - Thailand	Process n°	3.1.5. 34860
Address	Bangkok - Thailand		
Material	Cimentitious adhesive	Test date	19-01-2017
Client ref.	Weber.tai grés	Entrance date	09-01-2017

## DETERMINATION OF ONE DAY SHEAR STRENGTH TO PORCELAIN MOSAIC TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	3,07	1,6	1,7
2	3,00	1,6	
3	3,59	1,9	
4	3,27	1,7	

Condition of all test materials to be tested 24 h under standard conditions


Test conditions: (23±2) °C, (50±5) % R.H.

Amount of water admix: 22 %(w/w)

Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1928/2017  
Sample ref. 2017.03.63/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand | Process nº 3.1.5. 34860  
Adress Bangkok - Thailand  
Material Cimentitious adhesive | Test date 25-01-2017  
Client ref. Weber.tai grés | Entrance date 09-01-2017

**DETERMINATION OF SEVEN DAY SHEAR STRENGTH TO  
PORCELAIN MOSAIC TILE**  
(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	6,31	3,4	3,4
2	6,43	3,4	
3	6,30	3,4	
4	6,44	3,4	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 % (w/w)  
Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1931/2017  
Sample ref. 2017.03.63/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand | Process nº 3.1.5. 34860  
Address Bangkok - Thailand  
Material Cimentitious adhesive | Test date 12-04-2017  
Client ref. Weber.tai grés | Entrance date 09-01-2017

**DETERMINATION OF TWELVE WEEK SHEAR STRENGTH TO PORCELAIN MOSAIC TILE**  
(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	5,92	3,2	3,6
2	7,11	3,8	
3	7,17	3,8	
4	6,94	3,7	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 % (w/w)  
Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1933/2017  
Sample ref. 2017.03.63/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand Process nº 3.1.5. 34860  
Address Bangkok - Thailand  
Material Cimentitious adhesive Test date 15-02-2017  
Client ref. Weber.tai grés Entrance date 09-01-2017

## DETERMINATION OF FOUR WEEK SHEAR STRENGTH TO PORCELAIN MOSAIC TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	6,03	3,2	3,2
2	5,35	2,9	
3	5,75	3,1	
4	6,46	3,5	

Condition of all test materials to be tested 24 h under standard conditions

Test conditions: (23±2) °C, (50±5) % R.H.

Amount of water admix: 22 % (w/w)

Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT N° 1.5.1936/2017  
Sample ref. 2017.03.63/CIC

Client	SAINT-GOBAIN WEBER Co., Ltd. - Thailand	Process n°	3.1.5. 34860
Adress	Bangkok - Thailand		
Material	Cimentitious adhesive	Test date	01-02-2017
Client ref.	Weber.tai grés	Entrance date	09-01-2017

## DETERMINATION OF SEVEN DAY WATER IMMERSION SHEAR STRENGTH TO PORCELAIN MOSAIC TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	4,42	2,4	2,6
2	5,30	2,8	
3	4,95	2,6	
4	5,12	2,7	

Condition of all test materials to be tested 24 h under standard conditions

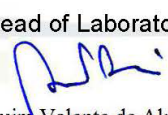
Test conditions: (23±2) °C, (50±5) % R.H.

Amount of water admix: 22 %(w/w)

Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1938/2017  
Sample ref. 2017.03.63/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand | Process nº 3.1.5. 34860  
Adress Bangkok - Thailand  
Material Cimentitious adhesive | Test date 13-03-2017  
Client ref. Weber.tai grés | Entrance date 09-01-2017

**DETERMINATION OF FOUR WEEK FREEZE-THAW SHEAR STRENGTH TO PORCELAIN MOSAIC TILE**  
(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	5,19	2,8	3,1
2	4,83	2,6	
3	6,95	3,7	
4	6,06	3,2	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 %(w/w)  
Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1940/2017  
Sample ref. 2017.03.64/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand | Process nº 3.1.5. 34860  
Address Bangkok - Thailand  
Material Cimentitious adhesive | Test date 15-02-2017  
Client ref. Weber.tai grés | Entrance date 09-01-2017

## DETERMINATION OF FOUR WEEK SHEAR STRENGTH TO QUARRY TILE

(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	28,45	3,1	2,7
2	24,77	2,7	
3	22,49	2,4	
4	26,22	2,8	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 % (w/w)  
Sampling made by manufacturer

COIMBRA, 11 July 2017

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TEST REPORT Nº 1.5.1942/2017  
Sample ref. 2017.03.64/CIC

Client SAINT-GOBAIN WEBER Co., Ltd. - Thailand Process nº 3.1.5. 34860  
Adress Bangkok - Thailand  
Material Cimentitious adhesive Test date 13-03-2017  
Client ref. Weber.tai grés Entrance date 09-01-2017

**DETERMINATION OF FOUR WEEK FREEZE-THAW SHEAR STRENGTH TO QUARRY TILE**  
(according ANSI A118.4:2012)

Number of specimens	Load (kN)	Shear strength (MPa)	
		Ind. values	Mean
1	27,90	3,0	2,8
2	22,41	2,4	
3	28,78	3,1	
4	26,74	2,9	

Condition of all test materials to be tested 24 h under standard conditions  
Test conditions: (23±2) °C, (50±5) % R.H.  
Amount of water admix: 22 %(w/w)  
Sampling made by manufacturer

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